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REMARKS

Under 35 USC § 102(e), claims 1, 2, 5-9, 11-14, 17, 18 were rejected as anticipated by Yen (US Pat. Publication. No. 2003/0100203). Claims 3, 4, 10, 15, 16, 19-27 were rejected under 35 USC § 103 as obvious over Yen (US Pat. Publication. No. 2003/0100203) in view of Amoni et al (US Pat. No. 6,334,793). The drawings were objected to.

The divider limitations of claim 3 are being incorporated into base claim 1. Likewise the divider limitations of claim 15 are being incorporated into base claim 11. This amendment should overcome the 35 USC § 102(e) rejection. Claims 23-27 are being cancelled to overcome the requirement of a new drawing.

35 USC § 103 Rejection

Amoni was cited as teaching "(Fig. 7) a plurality of plastic dividers rising above the contact surface of the connector substrate." However, Amoni nowhere uses the word "divider" in his patent, nor does Amoni describe a divider. The cited Fig. 7 is a cross-section of a plug and a receptacle that are connected together. The plug is shown in Amoni's Fig. 5 (end cross-section) and Fig. 6 (overhead view). Fig. 6 clearly shows no dividers between pads 504, 506, 505, 503, only white (empty) space. Thus there are no dividers between the contact pads.

A second line in Fig. 7 behind receptacle contact 703 and above plug contact 504 is part of housing 303 of the plug, which can be clearly seen in Fig. 6, where the label "303" points to the portion of the housing parallel to contact 504. This second line is not a divider, as can be seen clearly in Fig. 6. It is merely the edge of housing 303 visible behind contact 505 in the cross-section of Fig. 7.

Thus the combination of Amoni et al. and Yen fails to teach or suggest the dividers of claim 3:

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a plurality of dividers, each divider disposed between an adjacent pair of the metal contacts, the plurality of dividers rising above the contact surface of the connector substrate;

There are no dividers "between an adjacent pair of the metal contacts" as recited in claims 3, 4, 10, 15, 16, 19. Thus claims 3, 4, 10, 15, 16, 19 cannot be obvious.

Applicant's Fig. 5A shows the dividers 44:

in the top view of Fig. 5A, metal contacts 42 are placed on a top surface of male slim USB connector 40 between dividers 44 and end rails 46. (Spec. para. [0033])

Applicant's Fig. 6A shows dividers 68:

Two end rails 66 and three dividers 68 are formed on the extension end of upper case 62. (Spec. para. [0043])

In describing Fig. 7B, an advantage of dividers 76 is described:

Three metal dividers 76 are formed between pairs of metal contacts 70 on extension 61. These metal dividers help produce a better fit by filling the gap between connectors when inserted and metal contacts 70 depress the spring metal contacts on the female connector. (Spec. para. [0049])

Nowhere is this advantage described in the cited art.

Synergistic, Unexpected Results from the Invention

While there is no requirement for synergism, if a particular combination does exhibit some synergistic result, this can be a secondary consideration indicative of the combination's non-obviousness. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530 (CAFC 1983). The invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. When such factors are described in the specification, they must be taken into account in determining if the prior art presents a *prima face* case of obviousness. *In Re Wright*, 6 USPQ 2d at 1961-2. (Fed. Cir. 1986) Some synergistic or unexpected results are noted in the specification:

Dividers 68 fill in the gap between board 60 and connector substrate 26. This provides a better, more secure fit, reducing wobble. When combined with the locking action of metal springs 24 into the locking depressions, vertical play or wobble is significantly reduced. (Spec. para. [0059], emphasis added)

The dividers reduce wobble. Reducing wobble in the slim USB connector is a synergistic result that has an advantage especially for half-height or slim connectors.

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Amoni Teaches Away

5 Amoni teaches away from the invention, since a second USB connector is needed for host extended signals. Amoni's Fig. 4 shows a regular USB connector 406 and a second connector 405 for additional voltage signals. Amoni's Fig. 13 again shows a standard USB plug portion 1303 and a second enhanced or non-standard USB portion 1304 (See col. 4, lines 39-43 and col. 5, lines 7-10).

10 Since Amoni requires 2 plugs, while the claimed invention only has 1 plug, Amoni teaches away. Amoni uses a second plug for the non-standard signals, while Applicant's (canceled) claim 23 recites additional contacts in the same connector:

15 wherein the metal contactor means comprises four USB contacts and a plurality of additional contacts,
 wherein the reduced-height USB connector is a reduced-height extended-USB connector or a reduced-height general purpose connector.

Thus Amoni teaches away from the invention of claims 23-27.

The additional contacts are described in Applicant's specification in paragraph [0069]:

20 The slim connector may be widened to accommodate extra metal contacts to become an extended-USB connector for future USB specification. Moreover, the width of the slim connector can be widened, and the height and metal contacts of the slim connector can be varied, making it into a general-purpose slim connector, for USB, extended-USB, PCI Express, mini PCI Express applications, etc.

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Thus the additional pins are disclosed in the specification. The locations of the additional pins are also disclosed:

30 Extra I/O pins can be added for higher bandwidth and data transfer speeds. The additional I/O pins can be used for multiple-bit data I/O communications, such as 2, 4, 8, 12, 16, 32, 64, ... bits. By adopting some or all of these new features, performance of flash memory cards/devices can be significantly improved. These additional pins could be located behind or adjacent to the existing USB pins, or in various other arrangements. The additional pins could be applied to male and female connectors, both the current or the new slim connectors. New types of flash memory cards/devices can be made with these new connectors, which have the additional pins. (Spec. para. [0073], emphasis added)

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40 In view of the above, it is submitted that claims 1, 2, 4-14, 16-22, as amended, are in a position for allowance. This application was filed with formal drawings that have not been amended. Applicant believes that a full and complete response to the office action

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has been made. Reconsideration and re-examination is respectfully requested. Allowance of the claims at an early date is solicited.

If the Examiner believes that a telephone interview would expedite prosecution of this
5 application, he is invited to telephone the undersigned at (831) 476-5506.

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Respectfully Submitted,



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